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# Range Management Program San Luis Resource Area



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SEPTEMBER 1978

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Bureau of Land Management  
764 Horizon Drive  
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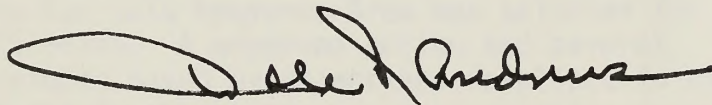
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## FOREWORD

This document summarizes and presents the alternatives and selected Range Management Program for the San Luis Resource Area in Colorado. The Bureau of Land Management is concerned about, and responsible for, the protection and enhancement of all resource values. This is a multiple-use program providing a wide array of resource benefits, as well as those of the livestock industry in the area. After analyzing all public comments, reviewing the land use planning objectives, and considering the natural and human resources of the area, I believe this program is most responsive to identified issues and needs.

I am very appreciative of the cooperation and assistance received from various groups, individuals, and local government who have a vital interest in the affected public lands.

It is my pleasure to make available to you this document which summarizes and discusses the thrust and rationale for this Range Management Program.

A handwritten signature in black ink, appearing to read "Dale R. Andrus". The signature is fluid and cursive, with a large loop at the beginning and a long, sweeping tail.

DALE R. ANDRUS  
State Director, Colorado  
Bureau of Land Management





## I. INTRODUCTION

Permanent livestock production was established in the San Luis Valley in about 1842. Most ranchers developed a pattern of moving livestock from the lower private lands in late spring to higher forest land for the summer, then moving the livestock onto public lands in the late summer and fall. Private lands provide the primary source of forage during the winter.

Additional demands on the public lands for wildlife habitat and watershed protection required BLM to reduce the stocking rates on most allotments in the mid-1950s. Many of these reductions ranged from 50 to 60 percent. In the early 1960s some additional reductions were imposed.

In 1973, several environmental groups and one individual (usually referenced as Natural Resource Defense Council (NRDC), et al.) filed suit in Federal Court alleging that the Bureau of Land Management's programmatic environmental statement on livestock grazing did not comply with the requirements of NEPA (42 USC 4321 et seq.) concerning BLM's administration of public lands. The Court in 1975 found largely for the plaintiffs and approved an agreement between the involved parties requiring completion of 212 site-specific environmental statements (ESs). The San Luis Resource Area was selected for the first grazing ES in Colorado. A proposed action and several alternatives were developed based on objectives developed in the Bureau's planning efforts for the area.

The San Luis Resource Area includes 516,371 acres of public lands. There are 165 management units within this resource area; 134 of these units are presently grazed as allotments by 110 livestock operators. Ten of these allotments are managed under existing Allotment Management Plans. The public lands presently contribute about 1.8 percent (35,000 Animal Unit Months (AUMs) of forage) of the amount required by the region.

Copies of a draft ES were sent to about 250 Federal, state, and local government agencies and non-government organizations for comments. Some of those reviewing the statement found some deficiencies, but the majority felt it was an adequate assessment. Many were very supportive of the document, especially local interest groups. Livestock interests were well represented at a public hearing held on February 23, 1977, and pledged almost total support. Some conservation groups found the document to be less than adequate.

All comments were addressed and where possible incorporated in the final statement. The San Luis Grazing Final ES evaluated a proposed



action and seven alternatives. It was filed in May 1978. No adverse comments were received on the final statement.

Thus, despite some differences with specific items in the ES, State and local interest groups were largely supportive of the proposed action and multiple-use alternatives.

## II. THE PROGRAM

### A. What It Is

Alternative "G", Balanced Multiple Use; Relationship to Public Issues, Land Use Objectives, National Environmental Policy Act (NEPA), and Federal Land Policy and Management Act (FLPMA): This alternative is responsive to identified issues and land use objectives. The following discussion identifies those accomplishments in a quantitative way. In regard to forest management, recreation and minerals, the action is either supportive of those objectives (i.e., 1,340 more visitor days of recreation per year), or places no constraints on development/use of them.

With regard to FLPMA, the decision is especially responsive to policy items 1, 2, 7, and 8, which call for retention in public ownership unless disposal is determined in the public interest; periodic and systematic inventorying and planning; establishment of goals and objectives for planning and use; requirement that public lands be managed in a manner that will protect the several qualitative values; and that the human and natural characteristics of the environment be protected or enhanced. This last goal closely approximates the mandate of NEPA which is likewise fulfilled (i.e., improvement of the human environment).

Objectives to be achieved by implementation of the selected range management program fall within five categories and are summarized in the following categories.

#### 1. Livestock Habitat

Present plant composition will be maintained where the range is currently in a favorable condition. Where range is in less than favorable condition, the percent composition of desirable species will be increased. The expected result will include the following changes by condition class:

	<u>Present</u>	<u>Change</u>	<u>Future</u>
Good	71,443	+200,196 =	271,639
Fair	249,955	- 94,459 =	155,496
Poor	<u>194,973</u>	<u>-105,737 =</u>	<u>89,236</u>
TOTAL	516,371	0	516,371

Forage available at the start of the program will be 34,213 AUMs, which is 91 percent of the present level. However, by 2005, it is expected that there will be 51,872 AUMs available for livestock use.

## 2. Wildlife Habitat

Shrub species composition will be maintained. Percentages of annual browse growth for particular species of wildlife will be reserved; in several cases, certain forb and browse species will be increased. Increases in big game populations are:

<u>Species</u>	<u>Present Population</u>	<u>Projected Change PL* Forage</u>	<u>Projected Population, PL*</u>		
			<u>Population after Change</u>	<u>Change %</u>	<u>No.</u>
Mule					
Deer	4,500	+22%	4,770	+6%	+270
Elk	2,600	+20%	2,730	+5%	+130
Antelope	1,145	+20%	1,317	+15%	+172
Bighorn					
Sheep	250	+30%	300	+20%	+50

## 3. Watershed Protection

By increasing ground cover, soil losses will be reduced. Erosion condition class will change by the following amounts:

<u>Erosion Condition</u>	<u>Present Situation</u>	<u>Projected Situation</u>
Stable	24,287	75,882
Slight	261,870	247,051
Moderate	205,043	178,642
Critical	25,171	14,796



#### 4. Aquatic Habitat

Stream bank cover will be maintained to preserve riparian vegetation and shade for aquatic species, and in some cases, improved by reducing grazing pressure along streams. A total of 7 miles of riparian habitat will improve to good or excellent condition due to stream fencing and planting of woody vegetation. This would be in addition to expected improvements in herbaceous riparian plants along other areas as a result of rest treatments. In some cases, adverse impacts could result if a 50-year or greater storm occurs on an area following heavy concentration of livestock.

#### 5. Socio-Economic Conditions

The long-term annual income impact would be an increase in range livestock-related income of \$42,000 annually. Ongoing maintenance-related income would add another \$16,439, with recreation-related income increased by \$32,374 annually. Another \$46,800 would go to BLM employees living in the San Luis Valley.

Thus, ongoing expenditures and activities would expand employment by nine or ten jobs annually. The positive impact would likely be welcomed but is not large enough to have a significant or noticeable impact on the regional employment/unemployment situation.

The projected availability of forage would increase by 17,659 AUMs annually (by year 2005) over current license levels. If allocated to domestic livestock, this would increase the carrying capacity of region ranches by 1,479 animal units and increase regional assessed valuation by \$443,700, which is .22 percent of the 1974 tax base.

#### B. What It Will Do

Alternative "G", Balanced Multiple Use, was selected because it is most responsive to major social issues, land use objectives, and economic concerns. It is cost-effective, and accomplishes necessary adjustments in grazing use, while meeting most other land use objectives. Under the selected management alternative, the following levels of management will be implemented within the resource area.



<u>Level of Management or Use</u>	<u>Acres</u>	<u>Units or Allotments</u>	<u>AUMs</u>
Intensive Management	442,650	80	33,179
Less Intensive Management	38,159	52	1,034
Unallotted for Grazing	19,900	21	--
Elimination of Grazing	10,921	10	--

The use levels specified in the selected alternative will be implemented incrementally over time as specific activity plans, eliminations, etc., are funded and ready for use.

In areas where resources are deteriorating under present use levels and an adjustment of use will stop or reverse deterioration, reductions will be made as soon as possible in accordance with the Grazing Administration Regulations (43 CFR 4000).

Under intensive management, the following types of grazing systems will be implemented:

<u>Grazing System</u>	<u>Number of Allotments</u>
Rest-rotation (1-5 pastures)	38
Deferred rest-rotation (1-4 pastures)	17
Deferred rotation (2 or 3 pastures)	15
Deferred (1 pasture)	11

A summary of season of use by acres under the selected alternative is as follows:

<u>Spring</u>	<u>Summer</u>	<u>Fall</u>	<u>Winter</u>
60,190	112,915	120,617	61,451

Approximately 115,000 acres would be rested yearlong in any given year.

In some instances, alternative Allotment Management Plans (AMPs) were chosen to remedy the specific resource problems of livestock/wildlife forage competition and poor riparian habitat conditions. The number of allotments and acres affected by this emphasis of wildlife/riparian values are summarized below:

Livestock/Wildlife Competition

<u>Allotments</u>	<u>Acres</u>
5	32,744

Riparian Habitat Conditions

<u>Allotments</u>	<u>Acres</u>
2	16,517

Also, two AMPs will still be implemented, even though they did not meet the standard 1:1 benefit/cost ratio objective. These two allotments are in poor condition, and there is a need for intensive management to solve the resource problems which less intensive management would not solve.

<u>AMPs</u>	<u>Acres</u>
2	1,863

In addition to the nine units proposed for elimination of grazing in Alternative "G", grazing will also be eliminated on the Posito Creel Allotment. In this instance the Colorado Division of Wildlife purchased the base property for big game (elk) winter range. The Division has relinquished the qualifications for livestock grazing on the allotment. Livestock grazing will not be allowed pending results of monitoring programs.

A total of 38,159 acres (52 units) will have less intensive management applied. Reasons for this lowered management level are:

1. These allotments were identified as having little resource value other than grazing by livestock.
2. Little potential for improvement through more intensive grazing management could be expected.

Twelve of these 52 allotments will receive less intensive management because:

1. Improvement can still be experienced under less intensive management, but at a slower rate.
2. Cost of development and supervision was not cost effective.
3. No major resource conflicts were identified.

Grazing will be eliminated on 10 units for a total of 10,921 acres.



Reasons for this elimination are:

1. Terrain is too steep.
2. Low forage production.
3. High wildlife values.
4. Watershed in critical erosion condition.

C. Public Issues and Planning Objectives

1. Summary of Major Issues

BLM planning meetings in the valley revealed the following attitudes and concerns:

- a. Protection of natural resource values.
- b. Prohibition of recreational vehicle use on erodible soils.
- c. Support for protective stipulations on energy development.
- d. Maintain or increase grazing levels to the extent the resource base allows.
- e. Some willingness to eliminate or reduce grazing to protect certain wildlife species.
- f. Protection of natural areas without public designation as primitive areas.
- g. Support for grazing management methods, instead of chemical or mechanical treatment, as the way to control undesirable plant species.

The most pervasive issue is that of the need to maintain or expand the economic base. Economically, the San Luis Valley is a relatively low income, predominantly agricultural region. The average per-household disposable income was \$8,000--a figure substantially below the state average of \$12,900. With respect to distribution, 22 percent of the households had incomes below \$3,000, with 14 percent above \$15,000, compared to 11 and 24 percent respectively for the state. The 1970 census data indicates that 19 percent of all year-round housing units lacked some or all plumbing facilities. Several of the counties in the San Luis Valley rank among the highest in the state with respect to proportion of the population on welfare.

In addition to concern for social and economic well being, prevailing attitudes seem to support management alternatives which foster harmony with recognized biological processes and continued multiple use of public lands.

2. Land-Use Objectives

Management Framework Plans (MFPs) covering the entire San Luis

Resource Area were completed in 1975. Decisions were made after thorough comparison of the grazing proposals to other resource proposals and after input from the general public, other agencies and interested groups.

The Saguache and San Luis MFPs established the following general management objectives and constraints for use in the preparation of Allotment Management Plans (AMPs) and other management prescriptions.

#### Livestock

- a. Implement intensive grazing systems (where management is feasible) to improve watershed condition by adjusting vegetative species and composition through livestock management.
- b. Consider chemical or mechanical vegetative manipulation (e.g., chaining) as a last resort; instead, use livestock management to achieve vegetative changes. This is based on recommendations of both wildlife and watershed.
- c. Combine allotments to maximum extent feasible in preparation of AMPs.
- d. Eliminate livestock grazing on all areas found to be unsuitable for grazing (e.g., Burnt Gulch Allotment).
- e. Maintain unallotted status on specific parcels in consideration of alternative and more efficient uses (e.g., exchange for private lands in order to achieve a more manageable configuration of public lands).
- f. Continue less intensive grazing management on several specific allotments because no specific problems or opportunities exist that call for more intensive domestic livestock management.
- g. Recognize the importance of domestic livestock grazing on the public lands as a significant factor in the economic stability of the San Luis Resource Area. Many grazing allotments provide a strategic or critical-use period that highlights their importance in providing operators with a year-round operation, thereby stabilizing agriculture, which is the most important form of income in the valley.

#### Wildlife

- a. Develop an AMP on the Blanca unit that primarily considers waterfowl and fisheries production and uses grazing as a tool to enhance waterfowl habitat.



- b. Do not allow any action which would destroy or diminish habitat of endangered species.
- c. Provide and maintain water for wildlife at all watering facilities throughout the summer.
- d. Construct all improvements to be compatible with wildlife.
- e. Impose constraints against certain seasons of use and/or amount of use by domestic livestock on specific allotments in consideration of wildlife habitat values (e.g., restriction against fall and winter use by livestock in favor of bighorn sheep on Trickle Mountain).

### Forestry

Continue forest management practices where compatible with other resource values (e.g., firewood sales). Treat forest stands for disease and insects (e.g., mistletoe reduction).

### Recreation

- a. Protect visual resources in vicinity of the Sand Dunes National Monument, Flat Tops Area, and along the Cumbres-Toltec narrow gauge railroad.
- b. Protect historic and archeologic sites.
- c. Allow continued recreational use such as snowmobiling, ice skating, cross-country skiing, off-road vehicle use, etc., where compatible with other resources (mainly wildlife).
- d. Manage for "wildland" values in areas such as Pinon Hills and adjacent to Sand Dunes.

### Minerals

Allow continued exploration and development of geothermal and other mineral resources.

### Other

General goals for grazing management that were developed in the MFPs for use in preparation of activity plans (AMPs) are as follows:

- a. Maintain or improve existing wildlife habitat on 516,371 acres of public lands.

- b. Increase ground cover, improve plant composition (for livestock, watershed, and wildlife), and reduce erosion class on 473,916 acres of public lands.
- c. Maintain or increase riparian habitat, particularly woody streambank vegetation, on 47 miles of permanent streams on public lands.
- d. Maintain production at approximately 36,000 AUMs of domestic livestock forage on public lands.

### III. ALTERNATIVES IN THE ES

The San Luis Grazing FES addressed a proposed action and seven alternatives. They were:

- a. No Action.
- b. Elimination of Domestic Livestock Grazing.
- c. Less Intensive Management of Grazing.
- d. Reduced Management on Specific Allotments.
- e. Wildlife Effective.
- f. Watershed Effective.
- g. Balanced Multiple Use.

The following section briefly describes and evaluates the proposal and each of the seven alternatives.

#### Proposed Action

- a. Intensive management of grazing (allotment management plans or AMPs) on 473,916 acres.
- b. Less intensive management of grazing on 16,625 acres.
- c. Elimination of grazing on 5,930 acres.
- d. Continuation of unallotted status of range on 19,900 acres.

Construction of various range improvements would be required to implement the AMPs, and fencing would be required to eliminate grazing



in some areas. Grazing use would total 34,552 AUMs annually.

Watershed conditions would improve overall; however, during infrequent, high-intensity storms, a 3 to 5 percent increase in sediment is expected on 302,000 acres. Production of vegetation would increase. Wildlife habitat would improve and big-game animals would increase. Declining aquatic communities would stabilize on 4.9 miles of stream. Forty acres of declining riparian communities would be improved. That segment of the livestock industry dependent upon public lands would be stabilized. Expenditures on improvements would provide benefits to an economically depressed area. Fencing would present obstacles to wildlife, as well as public land users. Some of the proposed AMPs were not cost-effective, and some wildlife and watershed objectives would not be met.

#### Alternative A: No Action

This alternative would be similar to the Proposed Action in respect to the types of grazing systems--rest rotation, deferred rotation, etc.; the range improvement projects--fences, water developments, erosion control structures, etc.; and grazing administration. However, the Proposed Action would be implemented over 8 years and the No Action alternative would be implemented over 45 years. (This rate is based on the current rate of AMP implementation.) With this alternative, the 10 existing AMPs would be continued. Management would continue as it is until implementation is accomplished on each allotment. Included is elimination of grazing on nine management units (5,930 acres) since these units are unsuitable for this purpose. Less intensive management of 39 units and the unallotted status of 22 units would be continued.

While most of the land use and resource objectives would be achieved eventually, the implementation rate would be so slow as to prevent accomplishment of many objectives within a reasonable timeframe.

#### Alternative B: Elimination of Domestic Livestock Grazing

Alternative B would eliminate domestic livestock grazing on public lands in the San Luis Resource Area. This would result in extensive boundary fencing to separate public lands from State and private lands, requiring construction of approximately 500 miles of fencing and causing some private landowners to close their lands to the public, which could limit access to public lands.

Implementation of this alternative is inconsistent with nearly all public input and planning objectives. Wildlife benefits would be short-term. Since domestic livestock could not be used as a vegetative management tool, long-term effects would be negative.



Income losses would be significant to users and to the area. Some benefits to soil and watershed resources would be realized.

#### Alternative C: Less Intensive Management of Grazing

On management units where public lands are consolidated and/or have identifiable resource values (e.g., wildlife and watershed), the grazing authorization would specify the class of livestock, the number of livestock allowed, and the season of use. At implementation, allowable grazing use would be reduced to a total of 27,674 AUMs. This represents about a 25 percent reduction in use on allotments proposed for AMPs in the proposed action.

Assumptions also include:

- a. Use levels for less intensive management units as identified in the proposed action would not change with this alternative.
- b. Elimination of grazing on 5,930 acres.
- c. Existing AMPs would be continued and operated as planned.
- d. No new AMPs, range improvements, or range studies would be developed.
- e. Unallotted status on 22 management units (19,900 acres) would continue.

Under this alternative, wildlife, watershed, and vegetative objectives would not be achieved. Full development of the potentially available forage would not occur since water developments and other range improvements would not be utilized. This alternative would minimize BLM management efforts and would be the least costly. Yet, the loss of income and adverse impacts on most resource values is inconsistent with the land-use objectives, public input, and the goals of NEPA and FLPMA.

#### Alternative D: Reduced Management on Specific Allotments

This alternative was developed by restricting intensive management to only those management units which would have a benefit/cost ratio of one or larger. Fewer range improvements would be constructed than were included in the Proposed Action.

Management would be as follows:

- a. Fifty-eight additional and ten existing AMPs would be managed as described in the Proposed Action on 372,548 acres.



- b. Twelve revised AMPs would be implemented on 78,221 acres. The revisions involve reducing the number of improvements and a combining of management units.
- c. Livestock grazing would be eliminated on nine management units totaling 5,930 acres.
- d. Less intensive management would be implemented on 53 units. This includes the same 39 units identified in the Proposed Action, plus 14 units not found to be cost-effective (23,147 acres).
- e. Unallotted status would continue on the 22 units as described in the Proposed Action (19,900 acres).

This alternative is less costly than the Proposed Action. Upon implementation, livestock use would be 34,581 AUMs annually. Adverse income effects would be small. Antelope forage would not increase to the intensive management level and antelope/livestock competition would increase to a higher-than-desirable level. Vegetative condition on 14 management units would not improve. Desired sediment yield decreases would not be realized on 5 of these 14 units.

#### Alternative E: Wildlife Effective

This alternative would be implemented as follows:

- a. On the 27 management units where significant livestock/wildlife conflicts have been identified, AMPs would be implemented as revised specifically for resolution of adverse impacts and to further enhance the various wildlife resources.
- b. The remaining 60 proposed and 8 existing AMPs, 9 eliminations of grazing, 39 less intensive management units, and 22 unallotted units would be implemented as described in the Proposed Action. Annual livestock use would be 33,755 AUMs without a commitment of future increases to permittees.

This alternative would optimize wildlife benefits but would not accomplish the multiple use planning objectives. Some reductions in ranch income would occur, although hunting-related income would increase. This would benefit primarily non-local users and would not alleviate local income problems. Watershed objectives would be only partially achieved.

#### Alternative F: Watershed Effective

This alternative would be implemented by pursuing the following type of management on the 165 management units:

- a. Fifty AMPs would be implemented, as revised for reduction of impacts on water resources.
- b. Forty-five AMPs, 9 eliminations of grazing units, 39 less intensive management units, and 22 unallotted units would be implemented as described in the Proposed Action.

This alternative would optimize watershed objectives and reduce soil losses to the minimum achievable. In doing so, wildlife and grazing objectives would not be met. The shifting of livestock use to fall/winter use conflicts directly with the objective to reserve forage for critical wildlife needs (winter habitat).

#### Alternative G: Balanced Multiple Use

This alternative was developed after giving consideration to such factors as economic costs and benefits, watershed improvement, wildlife enhancement, and grazing (including user concern), as identified in the Proposed Action and Alternatives A through F.

The purpose of this alternative is to produce the most benefits while reducing adverse impacts of grazing management throughout the San Luis Resource Area. Total livestock grazing use would be 34,563 AUMs annually, with no commitments to future increases.

This alternative includes the following:

- a. Implement 55 AMPs and continue with 9 existing AMPs as described in the Proposed Action.
- b. Implement 7 AMPs as revised for optimum wildlife (including 1 existing AMP--2E Arizona-Colorado).
- c. Implement 12 AMPs as revised to reduce cost.
- d. Eliminate livestock grazing on 9 management units as described in the Proposed Action.
- e. Implement less intensive management on 39 management units as described in the Proposed Action, and on 12 additional management units, 21,284 acres of public lands, which had AMPs proposed but were not economically feasible.
- f. Continue unallotted status on 22 management units as described in the Proposed Action.



While this alternative does not maximize positive effects for any one resource (i.e., water, soil, vegetation, or wildlife), it does provide a balanced approach to resource management following a multiple-use concept, and would accomplish most planning objectives. It is consistent with the values and issues identified at BLM public meetings.

#### IV. PUBLIC INVOLVEMENT

This section briefly summarizes some of the past and ongoing public involvement during the planning, environmental assessment, and implementation phases of the grazing program described earlier in this document.

##### Saguache MFP (meetings):

- 5/25/72 - State Government Representatives
- 6/05/72 - Local Governments
- 6/06/72 - San Luis Valley Regional Planning Commission
- 6/09/72 - General Public Meeting

##### San Luis MFP (meetings):

- 4/17/75 - Wildlife Resource Group
- 4/24/75 - Recreation Interest Group
- 4/25/75 - Livestock Interest Group
- 5/01/75 - Local Governments
- 5/02/75 - San Luis Valley Federal and State Agencies
- 5/06/75 - General Public Meeting

##### San Luis Grazing ES:

- |                   |   |
|-------------------|---|
| Fall 1975         | Meeting with County Commissioners (four counties)   |
| September 1975    | Tracy Grazing Association Meeting                   |
| September 1975    | First ES Team Meeting                               |
| October 1975      | Rio Grande Common Allotment Area Meeting            |
| December 1975     | AMPs completed (all operators except two contacted) |
| January 1977      | DES available to public                             |
| February 23, 1977 | Public Hearings                                     |
| March 1, 1977     | Comment Period closed                               |
| May 12, 1978      | FES available to public                             |

## After FES Filed:

August 25, 1978	Discussion of implementation with Advisory Board
September 1978	Range Program Document available to public.
October 1978 and beyond	Day-to-day contact with users and interest groups will continue as specific features of the range program are implemented.

## V. IMPLEMENTATION

### A. Administration

Grazing administration will be consistent with the Grazing Administration Regulations (43 U.S.C. 4000). Permits and leases will be issued by BLM to authorize use. On allotments where forage available is equal to present-use levels, a grazing permit or lease will be issued for a 10-year period. On allotments where existing permits or leases exceed forage available for livestock, permits ranging from 1 to 5 years duration will be issued until a full adjustment is made.

Grazing use will be adjusted with available forage to provide optimum use while assuring resource protection and accomplishment of objectives. When additional forage becomes available it will be allocated on either a permanent or temporary basis, consistent with planning objectives and regulatory procedures. When available forage is less than that authorized, grazing permits and leases will be suspended or canceled in whole or in part.

Adjustments in use will be completed within three years when the reduction will stop or reverse resource depletion. When reductions are only one part of the management plan for an allotment and additional features are needed to stop resource depletion, then reduction will be implemented as a part of AMP implementation. Individual grazing decisions will be issued by the District Manager to each user as funding and manpower allows, consistent with the above.

### B. Improvements

The following improvements will be necessary to implement the grazing program and achieve the objectives in this alternative.



### Water Developments

Wells	15
Springs	25
Catchments	6
Pipelines	101.62 miles
Easements	1.25 miles
Storage Tanks	15
Water Troughs	147
Reservoirs	38

### Other

Boundary Markers	2006
Cattleguards	19
Check Dams	33

### Fences

New	217.88 miles
Easements	0.5 miles
Removal	0.38 miles
Repair	11.75 miles

These improvements will cost an estimated \$1.23 million (1975 dollars) and will be installed as funding and manpower capability allows.

### C. Related Projects

The implementation of this program complements or facilitates the implementation of the following wildlife and forestry plans.

1. Blanca Waterfowl Wildlife Habitat Management Plan (HMP).
2. Trickle Mountain HMP (Bighorn Sheep).
3. Saguache/Sangre de Cristo HMP (Mule Deer, Elk, and Antelope).
4. Installation of guzzlers and other items making water available to wildlife during the full grazing season.
5. Cochetopa Forest Management Plan.

### D. Manpower and Funding Needs

Manpower and funding availability in the range management program is a critical factor in implementing this program. Without that support BLM will not be able to implement and monitor this program as fast as discussed in the FES.

### E. Monitoring and Evaluation

The grazing program will require monitoring and evaluation in three categories: 1) Program management and compliance, 2) Activity plan revision and development, and 3) Studies and monitoring.

1. Program management and compliance: Quality control through permit issuance and compliance with the grazing authorizations will be assured.
2. Activity plans revision and development: Each of the 95 allotments with Allotment Management Plans will require fine tuning before each AMP is implemented. To date, each has required some revision. The various grazing systems will require a review and evaluation on an average of every three years based on the studies program. Following the evaluation AMPs may require adjustments. An average of 35 AMPs will be evaluated each year.
3. Studies and monitoring: The studies in the San Luis Resource Area will not be limited to standard range management studies but will also include studies in such fields as watershed, wildlife, and wilderness.

#### Range Management Studies

Actual Grazing Use  
Precipitation--Temperature (Climatological)  
Vegetative Utilization  
Vegetative Trends

#### Recreation and Cultural Resource Clearances

Archeological	)	Prior to actual project
Roadless/Wilderness	)	construction and AMP
Historic	)	implementation.

#### Water Studies

Hydrologic Network

#### Wildlife Studies

Stream and Riparian Inventory and Monitoring

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